

Serial No. 09/821,722

- 7 -

Art Unit: 2827

REMARKS

Claims 1-3, 5, 6, 12, 13, and 29-33 are presented for examination. Claims 1-3, 5, 6 and 13 were rejected under 35 U.S.C. §103(a) as unpatentable over Dickirson. Claims 12 and 29-33 were rejected under 35 U.S.C. §103(a) as unpatentable over Khandros. None of the claims is currently amended.

The presently claimed invention distinguishes the cited references because direct signal layer interconnection is used in conjunction with shielding inside the PCB. High frequency communications can be adversely affected by techniques for physically routing signals between PCB layers, such as the impedance mismatch associated with vias. (See Specification at page 2). Further, close proximity to other signal traces can result in undesirable cross-talk. The presently claimed invention includes a technique whereby shielding of traces inside the PCB can be used in conjunction with direct signal layer interconnection in order to help avoid those problems and thereby enable use of higher frequency signals. Nevertheless, the Office contends that the recited shielding is old and known in the art. Applicant respectfully traverses. While shielding of wiring and entire devices has been known, Applicant does not believe that shielding around (i.e., not just on two sides) an inner layer is old and well known. Further, even if such shielding was known it was not known in conjunction with direct signal layer interconnects. Withdrawal of the rejections of claims 1-3, 5, 6, 12, 13, and 29-33 based on Dickirson and Khandros is therefore requested.

The rejections also must be withdrawn because they are improper. To establish a *prima facie* case of obviousness, three basic criteria must be met including that the prior art references must teach or suggest all the claim limitations. MPEP 2143 The Office explicitly concedes in the OA that the cited references fail to teach the claimed shielding. At page 3, first paragraph of the OA the Office states "Dickirson does not disclose a shielding disposed around the at least one

Art Unit: 2827

- 8 -

Serial No. 09/821,722

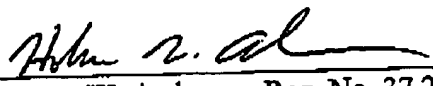
signal trace." Similarly, at page 4, first paragraph, the Office states "Khandros does not disclose a shielding disposed around the at least one signal trace." Since the Office has explicitly conceded that the cited references do not teach or suggest the shielding limitation, the rejections are improper under MPEP 2143 and must be withdrawn. Further, the finality of the rejections should be withdrawn since no proper rejections were made in the OA.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Applicants' Attorney at 978-264-4001 (x305) so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application, including all claims currently under examination, is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

Nov. 29, 2005
Date


Holmes W. Anderson, Reg. No. 37,272
Attorney/Agent for Applicant(s)
Steubing McGuinness & Manaras LLP
125 Nagog Park
Acton, MA 01720
(978) 264-6664

Docket No. 13888ROUS02U 120-042
dd: 12/5/2005